

Serial No. 10/661,567
Filed: September 15, 2003
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Examiner: Brittany M. Martinez
Group Art Unit: 1793

Amendments to the Drawings

Please replace the original drawing sheets containing Figures 2A, 2B, 5, 6, 7, and 8 with the attached Replacement Sheets containing amended Figures 2A, 2B, 5, 6, 7, and 8. Annotated Sheets with marked-up versions of Figures 2B, 5, 6, 7, and 8 are provided to assist the Examiner in readily identifying the amendments made to Figure 2B, 5, 6, 7, and 8.

Attachments: Replacement Sheets

Annotated Sheets

Remarks/Arguments

Claims 63-66, 68-78 and 94-95 are pending in the application.

By this amendment, claim 94 has been amended, claims 63 and 79-93 have been canceled and new claims 96-98 have been added.

Applicant believes the amendments made herein add no new matter. Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based on prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to be attached thereto.

Reconsideration and reexamination of the application is respectfully requested in view of the amendments and the following remarks.

Objections to the Drawings

The drawings have been objected to as failing to comply with 37 C.F.R. 1.84(p)(5). Specifically, the Examiner has indicated that reference numeral 49, and 10A-10I are not included in the drawings. Further, the Examiner has indicated that reference numeral 52 is not labeled in Figure 7 and that reference numerals 30 and 32 were both used to identify the same aspect of the figure. The objection is respectfully traversed.

Figures 2B, 5, 6, 7, and 8 have been amended to address these issues. As a result of the amendments to the drawings, Applicant requests that the objection to the drawings be withdrawn.

The drawings have been objected to as failing to comply with 37 C.F.R. 1.84(b). Specifically, the Examiner has indicated that Figures 2A, 2B, 5, 6, and 8 are not of sufficient quality for reproduction in a printed patent document. The objection is respectfully traversed.

Figures 2A, 2B, 5, 6, and 8 have been amended to address these issues. As a result of the amendments to the drawings, Applicant requests that the objection to the drawings be withdrawn.

Rejection Under 35 U.S.C. §103(a)

Claims 64, 66, 68, and 94 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent Application Publication No. 20020060428 to Warren. The rejection is traversed.

Warren '428 discloses a biodegradable skeet target with a body composed principally of a thoroughly dried composted waste material, such as sewage sludge, composted animal manure, or a mixture of the two and a method for making the target. The target may also include a filler material such as sand. As an alternative to or in addition to the composted waste material, prepared plant fertilizer may be used as the principal material in the composition of the target. The method includes mixing sand with composted organic waste material that has been thoroughly composted or digested in the course of the treatment process, and dried to remove excess moisture. These dry ingredients are then mixed with a sufficient quantity of binder material, in liquid form, to achieve a workable consistency, generally as a thick slurry or dough-like mass. The slurry is placed in a mold or form and compacted into the desired configuration for the target. The binder is allowed to cure sufficiently for the targets to be removed from the mold or form, and the curing process is completed.

Applicant respectfully traverses the rejection based on Warren '428 because the Examiner has failed to meet the *prima facie* requirements required under *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which expressly requires the following factual inquiries: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the claimed invention and the prior art; and (3) resolving the level of ordinary skill in the art.

The rejection fails to meet the second factual inquiry of *Graham* because the rejection is based on a mischaracterization of the claimed invention. The mischaracterization of the claimed invention arises from the Examiner's conclusion that the term "raw organic material" includes processed waste. *Office action*, p. 4. The Examiner's faulty conclusion is based on the assumption that the composted organic waste material which has been thoroughly composted or digested in the course of the treatment process, and dried to remove excess moisture of Warren '428 (See Warren '428, p.3, [0023-0024]) is the "raw organic waste" as claimed. *Office Action*,

p. 4. This is directly contradicted by the express language of claim 94 of the claimed invention, which recites "raw organic waste" and the specification which defines raw organic waste as being in its natural or unprocessed state. (*See Specification*, p. 8, l. 11-13). Further, the specification repeatedly draws a distinction between raw organic waste and waste that has been processed or waste that has been partially processed (*See Specification*, p. 5, l. 5-8; p. 6, l. 12; p. 8, l. 11-13). Moreover, the common understanding of the term "raw" is something that is in or nearly in its natural state, or something that is not processed or purified. (*See* <http://www.merriam-webster.com/dictionary/raw>).

The Examiner's mischaracterization of claim 94 enables the claim 94 to be satisfied by a prior art reference that discloses a process that begins with processed waste instead of raw organic waste. However, the claim language is very clear that the invention requires raw organic waste not just some form of organic waste. As such, when the Examiner applies claim 94 to the prior art, the Examiner is necessarily improperly identifying the differences between claim 94 and the prior art.

The substantial mischaracterizations of the claimed invention by the Examiner make clear that the Examiner has not ascertained the differences between the claimed invention and the prior art as required by the second *Graham* factor. Any use of the improperly construed scope and content of the prior art and claimed invention necessarily fails to meet the second *Graham* factor. Therefore, the rejection fails to meet the *prima facie* standards for an obviousness rejection.

While Applicant believes the prior claim language made clear that the organic waste was raw and not processed, which Warren '428 does not show, to make it more clear, claim 94 has been amended and now calls for, in relevant part, a process for producing a biodegradable solid of organic waste comprising *reducing raw organic waste to pieces before it is dried*. Thus, the organic waste is in a raw form at the start of the claimed process.

Considering the teachings of Warren '428, using raw organic waste to form a unitary biodegradable solid from a mixture of the raw organic waste and a biodegradable would not be obvious to one of ordinary skill in the art because the Warren '428 teaches using a non-raw or

processed organic waste in the form of composted or treated organic waste. (See Warren '428, p.3, [0023-0024]). Warren '428 teaches away from using raw organic waste because it teaches using composted or treated organic waste. Further, it teaches that the thoroughly composted or digested waste has already been dried to remove excess moisture. (See Warren '428, p.3, [0023]). For these reasons, a person of ordinary skill in the art would not conclude that the invention of claim 94 would have been an obvious variation of Warren '428. As the combination does not reach the claimed invention, claim 94 is non-obvious and therefore patentable over the combination.

As claims 64, 66, and 68 depend from claim 94, claims 64, 66, and 68 necessarily include the unitary biodegradable solid formed from raw organic waste found in claim 94. Given that Warren '428 fails to disclose the claim element of a unitary biodegradable solid formed from raw organic waste as called for by claim 94, Warren '428 fails to disclose every element of the claims. Therefore, claims 64, 66, and 68 are also not obvious in view of the combination.

Claims 65 and 74-78 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent Application Publication No. 20020060428 to Warren in view of U.S. Patent No. 5,772,721 to Kazemzadeh. The rejection is traversed.

Kazemzadeh '721 discloses a substantially odorless and sterilized fertilizer in pellet form is produced by combining a dry organic waste material and a dry binder material, then combining the resulting dry mixture with steam, water and/or further organic waste in the form of sludge. That mixture is provided to an extruder where pressure and heat may be applied. The extruded material is forced through a die and the emerging material is segmented and dried, or segmented and tumbled to form pellets, then dried.

Applicant respectfully traverses the rejection based on the combination of Warren '428 and Kazemzadeh '721 for failing to meet the prima facie requirements required under *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which expressly requires the following factual inquiries: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the claimed invention and the prior art; and (3) resolving the level of ordinary skill in the art.

The rejection fails to meet the first two factual inquiries because the combination of Warren '428 and Kazemzadeh '721 is based on a mischaracterization of Kazemzadeh '721. As the prior art is mischaracterized, it is impossible for the first two factual inquiries to be satisfied. The mischaracterization of Kazemzadeh '721 arises from the Examiner's stating that Kazemzadeh '721 "discloses combining organic waste material, a carbohydrate binder, and water to form organic and semi-organic, substantially odorless solid fertilizers (Kazemzadeh, c. 1, l. 5-10; c. 2, l. 42-51; c. 5, l. 9-11, 25-26, and 41-51); wherein the biodegradable carbohydrate binder is heat activated (Kazemzadeh, c. 2, l. 48-51)." Office Action, p. 6. The Examiner's statement that the binder is heat activated appears to be based merely on the fact that the binder is heated to at least a glass transition temperature of the binder. However, the Examiner's conclusion ignores that the binder's heat activation temperature may be different from its glass transition temperature (the temperature at which an amorphous solid, such as glass or a polymer, becomes brittle on cooling). Although heat is applied, Kazemzadeh '721 only discloses heating to above the glass transition temperature of the binder, or more preferably to at least about 125.degree C. to substantially sterilize the material mass. (See Kazemzadeh '721, p.1, abstract). Kazemzadeh '721 does not disclose heating to the point where the biodegradable binder is activated as disclosed in claims 76 and 78.

These substantial mischaracterizations of the prior art by the Examiner, make clear that the Examiner has not construed the scope and content of the prior art as required by the first Graham factor. Any use of the improperly construed scope and content necessarily fails to meet the second Graham factor. Therefore, the rejection fails to meet the prima facie standards for an obviousness rejection. The rejection also fails to meet the second factual inquiries because the Examiner has made a mischaracterization of the claimed invention. Any subsequent comparison of the prior art to the inaccurate determination of the scope and content of the claims will inherently lead to an incorrect determination of the differences between the claims and the prior art.

Moreover, there is no resolution of the level of ordinary skill in the pertinent art. Indeed, there is no discussion at all of the level of ordinary skill in the pertinent art. While the Office

Action asserts what an ordinarily skilled artisan would think or do, these are mere conclusions without any support. For these reasons, a *prima facie* case of obviousness has not been made, and the rejection cannot be sustained.

The Office Action asserts that "the presence of water and/or carbohydrate in reduced organic waste would have been common knowledge to a person of ordinary skill in the art at the time of the invention." *Office Action*, p. 6. The examiner also states that "it would have been obvious to one having ordinary skill in the art to modify the process disclosed by Warren with the water and heat activated binder as taught by Kazemzadeh because one of ordinary skill in the art could have pursued the known potential options for maximizing process efficiency and minimizing process costs within his or her technical grasp with a reasonable expectation of success." *Office Action*, p. 6. The Office Action offers no support for this conclusory statement other than what is disclosed in Applicant's specification. In fact, the combination actually teaches away from the water or binder in the mixture being derived from the raw organic waste because both Warren '428 and Kazemzadeh '721 teach using dried organic waste.

Even if the combination were proper, which it is not, the resulting invention would not reach the invention of claim 94. As discussed above, claim 94 calls for among other things a unitary biodegradable solid formed from raw organic waste. Kazemzadeh '721 does not overcome the prior identified deficiencies in Warren '428. The rejection of Warren '428 in view of Kazemzadeh '721 fails for the same reason as Warren '428 alone, and the rejection cannot be sustained.

Claims 65 and 74-78 depend from claim 94 and, for the same reasons, are patentable over Warren '428 in view of Kazemzadeh '721. Applicant's requests withdrawal of the rejection, and the allowance of claims 65 and 74-78.

Claims 63, 69-72, and 95 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent Application Publication No. 20020060428 to Warren in view of U.S. Patent No. 5,634,600 to Kubota. The rejection is traversed.

Claim 63 has been canceled from the application; therefore, the rejection with respect to this claim is moot.

Kubota '600 teaches a refuse process machine that grinds waste into small pieces by a grinding and stirring means and then dries the waste. The dried waste is periodically recovered and discarded. Thus, the end product disclosed in Kubota '600 is unbound fragments of waste dust that must be removed periodically from the waste container.

Applicant respectfully traverses the rejection based on the combination of Warren '428 and Kubota '600 for failing to meet the prima facie requirements required under *Graham v. John Deere Co.*, 383 U.S. 1 (1966), which expressly requires the following factual inquiries: (1) determining the scope and content of the prior art; (2) ascertaining the differences between the claimed invention and the prior art; and (3) resolving the level of ordinary skill in the art.

Again, the rejection fails to meet the second factual inquiries because the Examiner has made a mischaracterization of the claimed invention. Any subsequent comparison of the prior art to the inaccurate determination of the scope and content of the claims will inherently lead to an incorrect determination of the differences between the claims and the prior art.

Assuming, *arguendo*, that the combination may be made, the combination still does not reach the claimed invention. Kubota '600 does not overcome the prior identified deficiencies in Warren '428. The rejection of Warren '428 in view of Kubota '600 fails for the same reason as Warren '428 alone. The combination of Warren '428 and Kubota '600 would result in dried pieces of waste being dried and disposed of. None of the references forming the combination of Warren '428 in view of Kubota '600 disclose a unitary biodegradable solid formed from raw organic waste, which is required by claim 94. As none of the references disclose this limitation, it is not possible for any combination of the references to disclose this limitation.

Considering the teachings of the combination, a unitary biodegradable solid formed from raw organic waste would not be obvious to one of ordinary skill in the art because the combination teaches dry organic waste pieces remaining pieces and just being dried more and disposed of. Further, the combination teaches away from processing raw organic waste because it teaches using processed or treated organic waste. For these reasons, a person of ordinary skill in the art would not conclude that the invention of claim 94 would have been an obvious variation of the combination of Warren '428 in view of Kubota '600. As the combination does

not reach the claimed invention, claim 94 is non-obvious and therefore patentable over the combination.

Claims 69-72 and 95 depend from claim 94 and, for the same reasons, are patentable over Warren '428 in view of Kubota '600. Applicant requests withdrawal of the rejection, and the allowance of claims 69-72 and 95.

Claim 73 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent Application Publication No. 20020060428 to Warren in view of U.S. Patent No. 5,634,600 to Kubota and further in view of U.S. Patent Application Publication No. 20040108277 to Krulik. The rejection is traversed.

Krulik '277 discloses a method for pretreating wastewater that is to be subsequently used in reverse osmosis filtration. Small amounts of chemicals are added to the wastewater to promote formation of filterable particles. These particles are then removed prior to the reverse osmosis treatment.

As an initial matter, the combination is improper because Krulik '277 is non-analogous art. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). "A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 864, 26 USPQ2d 1767 (Fed. Cir. 1993). While Patent Office classification is some evidence of analogy, the similarities and differences in structure and function of the inventions disclosed in the references carry far greater weight. *In re Clay*, 966 F.2d 656, 23 U.S.P.Q.2D (BNA) 1058 (Fed. Cir. 1992).

Krulik '277 fails to satisfy either of these tests. First, Krulik '277 is not in the same field of endeavor as Applicant's invention. Krulik '277 is directed to pretreating wastewater before it is introduced into a reverse osmosis system. Applicant's invention is directed to producing a

unitary biodegradable solid from raw organic waste. Pre-treating wastewater and forming a unitary biodegradable solid from raw organic waste are not the same field of endeavor.

Krulik '277 is not reasonably pertinent to the particular problem with which Applicant is concerned. Applicant's invention is concerned with a process for producing a biodegradable solid of organic waste and Krulik '277 is concerned with filtering water. These are entirely unrelated problems. Krulik '277, because it is concerned with filtering water, would not have commended itself to an inventor's attention in attempting to solve the problem of producing a biodegradable solid of organic waste. Thus, the combination is improper as made, and the rejection based on the improper combination is not sustainable.

The combination is further improper for the same reasons as stated above for the underlying combination of Warren '428 and Kubota '600. The addition of Krulik '277 does not address the previously stated shortcomings of the underlying combination, even if Krulik '277 was analogous art.

Assuming, *arguendo*, that the combination is tenable, the combination does not teach or suggest all the claim limitations, and the claim limitations not taught would not have been obvious to one of ordinary skill in the art.

None of the references forming the combination of, Warren '428 in view of Kubota '600 and further in view of Krulik '277 disclose the process for producing a biodegradable solid from raw organic waste as found in claim 94. Thus, regardless of how they are combined, they will not include the process for producing a biodegradable solid from raw organic waste found in claim 94. As discussed above, Warren '428 and Kubota '600 do not disclose such a process. Krulik '277 also does not disclose such a process for producing a biodegradable solid from raw organic waste. Therefore, claim 94 is not obvious in view of the combination.

Claim 73 depends from claim 94 and, for the same reasons, is patentable over Warren '428 in view of Kubota '600 and further in view of Krulik '277. Applicant's requests withdrawal of the rejection, and the allowance of claim 73.

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CONCLUSION

Applicant submits that all of the claims remaining in the application are allowable over the prior art of record. Nevertheless, Applicant is filing a Request for Continued Examination contemporaneously herewith pursuant to 37 C.F.R. §1.114. Prompt notification of allowability is respectfully requested. If there are any outstanding issues that the Examiner feels may be resolved by way of telephone conference, the Examiner is cordially invited to contact the undersigned to resolve these issues.

Respectfully submitted,

ALEXANDER MANU

Date: October 22, 2008

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